

356-027-USP
By Facsimile

Remarks

Claims 1-19, 21-29 are currently pending in the application. Applicant has canceled claim 20 and amended claim 19 to incorporate the limitations of claim 20 into claim 19. Applicant has also added new claims 26-29. Support for these new claims can be found throughout the originally-filed specification and drawings. *See, e.g.*, Figures 3 and 5. No new matter has been added. Applicant believes that new claims 26-29 are also patentable over the cited references for the reasons stated below.

I. Rejection under 35 U.S.C. § 102 (Sakata)

Claim 19 stands rejected under 35 U.S.C. §102(e) as being anticipated by United States patent 6,870,725 issued to Sakata et al. (the Sakata reference). Applicant respectfully traverses this rejection for at least the following reasons.

Claim 19 has been amended to incorporate the limitation of claim 20. As the Examiner implicitly admits by not rejecting claim 20 as being anticipated by the Sakata reference, claim 19, as amended, is not anticipated by the Sakata reference for at least the reason that the Sakata reference fails to teach the limitation added to claim 19. Accordingly, Applicant respectfully requests that the Office reconsider and withdraw the rejection of claim 19 and allow claim 19.

II. Rejection under 35 U.S.C. § 102 (Noguchi)

Claims 19 and 21-24 stand rejected under 35 U.S.C. §102(e) as being anticipated by United States patent 6,433,997 issued to Noguchi et al. (the Noguchi reference). Applicant respectfully traverses this rejection for at least the following reasons.

“A claim is anticipated only if each and every element as set forth in the claim is found, either expressly or inherently described, in a single prior art reference.” *See* MPEP § 2131, *Verdegaal Bros. v. Union Oil Co. of California*, 814 F.2d 628, 631, 2 USPQ2d 1051, 1053 (Fed. Cir, 1987). Further, the identical invention must be shown in as complete detail as is contained in the claim. *See* MPEP § 2131, *Richardson v. Suzuki Motor Co.*, 868 F.2d 1226, 1236, 9 USPQ2d 1913, 1920 (Fed. Cir, 1989). Applicant

356-027-USP
By Facsimile

respectfully submits that the Office has failed to show that each and every element as set forth in the rejected claims is disclosed in the Noguchi reference as noted below.

A. Claim 18

Applicant respectfully submits that the Office has failed to show that the Noguchi reference discloses, teaches, or suggests at least the feature of "providing a battery-sized housing," as recited by claim 18 (emphasis added).

The Office seems to confuse the difference between a battery-sized housing and a battery-shaped housing. Specifically, the Office alleges that the cylindrical shaped vessel disclosed in the Noguchi reference discloses the claimed limitation of a battery-sized housing. Applicants are unaware of any teaching in the Noguchi reference as to the size of the disclosed cylindrical vessel. The mere fact that the vessel disclosed in the Noguchi reference is cylindrical simply does not anticipate claim 18 that recites, *inter alia*, a battery-sized housing.

Further, the Office is apparently attempting to rely on personal knowledge in the rejection of claims 18 and 21-24. First, the Office asserts personal knowledge that the cylindrical shaped vessel disclosed in the Noguchi reference is identical to the battery sized housing recited in claims 18 and 21. *See, e.g.*, paragraph 3 of the final Office action dated March 27, 2006. Applicant is unaware of any teaching in the Noguchi reference that supports this assertion.

Second, the Office further asserts personal knowledge that "the battery have been made by the double layer capacitor, therefore, the double layer capacitor as taught by Noguchi et al. could be used for the battery as well." *See, e.g.*, paragraph 3 on page 3 of the final Office action dated March 27, 2006. Applicant does not understand what "battery" the Office disclosed in the Noguchi reference to which the Office is referring.

Applicant respectfully repeats its request made in the response filed December 14, 2005 that the Office provide support for the asserted facts, either in the form of a reference supporting these allegations or in an affidavit supporting these allegations. The Office is respectfully directed to 37 C.F.R. § 1.104(d)(2). Applicant respectfully request that the Office comply with the rules of practice and put the factual assertions with respect to the size of the vessel 2 disclosed in the Noguchi reference and with respect to the comment that the battery of the Noguchi reference has been made by a double layer

356-027-USP
By Facsimile

capacitor by affidavit or provide a prior art reference that adequately supports the Office's factual allegations made on personal knowledge. If the Office is unwilling or unable to do so, the Applicant respectfully requests that the Office withdraw the unsupported factual allegations.

Accordingly, Applicant respectfully requests that the Office reconsider and withdraw the rejection of claim 18 and allow claim 18.

B. Claims 21-24

Applicant respectfully submits that, for at least the reasons stated above with respect to claim 18, the Office has similarly failed to show that the Noguchi reference discloses, teaches, or suggests at least the feature of "a battery-sized energy storage device" (emphasis added) as recited by claim 21, from which claims 22-24 depend.

As stated above, the Office seems to confuse the difference between a battery-sized energy storage device and a battery-shaped energy storage device. Specifically, the Office alleges that the cylindrical shaped vessel disclosed in the Noguchi reference discloses the claimed limitation of a battery-sized energy storage device. Applicants are unaware of any teaching in the Noguchi reference as to the size of the disclosed cylindrical vessel. The mere fact that the vessel disclosed in the Noguchi reference is cylindrical simply does not anticipate claim 18 that recites, *inter alia*, a battery-sized energy storage device.

Further, as stated above, the Office is apparently attempting to rely on personal knowledge in the rejection of claims 18 and 21-24. First, the Office asserts personal knowledge that the cylindrical shaped vessel disclosed in the Noguchi reference is identical to the battery-sized energy storage device recited in claims 18 and 21. *See, e.g.*, paragraph 3 of the final Office action dated March 27, 2006. Applicant is unaware of any teaching in the Noguchi reference that supports this assertion.

Second, the Office further asserts personal knowledge that "the battery have been made by the double layer capacitor, therefore, the double layer capacitor as taught by Noguchi et al. could be used for the battery as well." *See, e.g.*, paragraph 3 on page 3 of the final Office action dated March 27, 2006. Applicant does not understand what "battery" the Office disclosed in the Noguchi reference to which the Office is referring.

356-027-USP
By Facsimile

Applicant respectfully repeats its request made in the response filed December 14, 2005 that the Office provide support for the asserted facts, either in the form of a reference supporting these allegations or in an affidavit supporting these allegations. The Office is respectfully directed to 37 C.F.R. § 1.104(d)(2). Applicant respectfully request that the Office comply with the rules of practice and put the factual assertions with respect to the size of the vessel 2 disclosed in the Noguchi reference and with respect to the comment that the battery of the Noguchi reference has been made by a double layer capacitor by affidavit or provide a prior art reference that adequately supports the Office's factual allegations made on personal knowledge. If the Office is unwilling or unable to do so, the Applicant respectfully requests that the Office withdraw the unsupported factual allegations.

Accordingly, Applicant respectfully requests that the Office reconsider and withdraw the rejection of claims 21-24 and allow claims 21-24.

III. Rejections Under 35 U.S.C. §103 (Sakata and Harats)

Claims 1-17 and 20 stand rejected under 35 U.S.C. § 103(a) as being unpatentable over the Sakata reference in view of United States patent number 5,554,918 issued to Harats et al. (the Harats reference). Applicant respectfully traverses this rejection for at least the following reasons.

A. Applicants submit that the Examiner has not established a *prima facie* case of obviousness for the claims rejected under 35 U.S.C. § 103(a).

Applicants note the following:

To establish a *prima facie* case of obviousness, three basic criteria must be met. First, there must be some suggestion or motivation, either in the references themselves or in the knowledge generally available to one of ordinary skill in the art, to modify the reference or to combine the reference teachings. Second, there must be a reasonable expectation of success. Finally, the prior art reference (or references when combined) must teach or suggest all the claim limitations. The teaching or suggestion to make the claimed combination and the reasonable expectation of success must be found in the prior art, not in the applicant's disclosure.

356-027-USP
By Facsimile

In re Vaeck, 947 F.2d 488, 20 USPQ2d 1438 (Fed. Cir. 1991) (emphasis added).

Applicants submit that the Office has failed to establish a *prima facie* case of obviousness for at least the reasons stated below.

1. There is no motivation in the prior art to combine the references as asserted by the Office.

Applicant respectfully submits that there is no suggestion or motivation in either the Sakata reference or the Harats reference for their combination or for how the features of the two devices could be combined so as to meet the structure as claimed in the present application. It has been found that, “when the incentive to combine the teachings of the references is not readily apparent, it is the duty of the examiner to explain why combination of the teachings is proper.... Absent such reasons or incentives, the teachings of the references are not combinable.” *Ex parte Skinner*, 2 USPQ2d 1788 (B.P.A.I. 1986). Applicant submits that the Office’s combination of the Sakata reference and the Harats reference is an improper combination of the references as being based upon a hindsight reconstruction of the Applicant’s claims as opposed to what the references really suggest. Further, the reasons cited by the Office in the rejection fail to support a *prima facie* case of obviousness because they are merely conclusory and fail to identify any proper suggestion or motivation in either of the references for their combination.

The Sakata reference discloses a capacitor cell “20” that is rectangular in shape and is covered by “an outer package 22 in decompression state (i.e., a state in which the pressure is lower than atmospheric pressure.)” See column 7, lines 34-36 and Figure 3 of the Sakata reference. The invention disclosed in the Sakata reference was developed to deal with improving the performance of an electric, double layer capacitor by reducing equivalent series resistance (ESR) of the capacitor. See column 2, lines 17-24 of the Sakata reference. According to the Sakata reference, one way to reduce ESR of the capacitor cell is by covering the capacitor cell with an outer package in a decompression state whereby a compressive force is always applied on the capacitor by atmospheric pressure. See column 1, lines 51-59 of the Sakata reference.

356-027-USP
By Facsimile

The Harats reference discloses a cylindrically-shaped battery that can be disassembled to allow the replacement of a zinc anode and cathode. See column 4, lines 10-13 of the Harats reference. The Harats reference is concerned with providing a manually-rechargeable single-cell battery for generating up to two volts, wherein mechanical recharging is accomplished by exchanging the zinc anode. See column 1, lines 6-11 of the Harats reference.

The Office asserts that, it "would have been obvious to one having ordinary skill in the art at the time the invention was made to use the battery housing of Harats et al. in Sakata et al. in order to enable the battery to be used in a device accepting standardized battery configurations and reduce the cost for manufacture." See paragraph 9 on page 6 of the final Office action dated March 27, 2006.

This assertion is simply conclusory and completely fails to identify or even acknowledge how the references would have to be modified to be combined. There is simply no mention of any motivation for altering the double layer capacitor disclosed in the Sakata reference to incorporate the battery housing disclosed in the Harats reference. Further, as described below, the combination of the two references would render the double layer capacitor disclosed in the Sakata reference inoperable for its intended use and further the Office has failed to identify any reasonable expectation that the combination would work.

The configurations of the double layer capacitor housing disclosed in the Sakata reference and the battery housing disclosed in the Harats reference are simply incompatible. As discussed above, the Sakata reference attempts to improve the performance of a double layer capacitor by reducing the ESR of the cell by enclosing the cell in an outer package that keeps the cell in a decompression state. The Harats reference, however, discloses a mechanically-rechargeable single-cell battery that is manually recharged by physically exchanging a zinc anode of the battery. While the double layer capacitor cell of the Sakata reference is kept in a decompression state by an outer package, the battery of the Harats reference must be accessible so that the zinc anode may be exchanged. There is not suggestion to combine these references available from the references themselves or from anywhere else in the prior art identified by the Office. One skilled in the double layer capacitor art trying to improve the performance of

356-027-USP
By Facsimile

the double layer capacitor of the Sakata reference would not look to an incompatible battery housing found in a reference dealing with manually recharging batteries. Similarly, one skilled in the battery art trying to mechanically recharge a battery would not look to a reference trying to improve the performance of a double layer capacitor.

Applicant submits that the only reason these references were submitted was because the Office used the present claims as a road map. As stated by the Federal Circuit, “[i]t is impermissible to use the claimed invention as an instruction manual or ‘template’ to piece together the teachings of the prior art so that the claimed invention is rendered obvious. One cannot use hindsight reconstruction to pick and choose among isolated disclosures in the prior art to depreciate the claimed invention.” *In re Fritch*, 972 F.2d 1260. The Applicant respectfully submits that the Office has failed to establish a *prima facie* case of obviousness for claims 1-17 and 20. Even if the Office has established a *prima facie* case of obviousness (which the Applicant refutes), the Applicant has traversed this showing of obviousness. Accordingly, the Applicant respectfully requests that the rejection be withdrawn and that claims 1-17 and 20 be allowed.

2. Even if it were somehow possible to combine the cited references, there is no evidence that the modified device would be satisfactory for its intended purpose.

Placing the capacitor cell disclosed in the Sakata reference into the battery housing disclosed in Harats would render Sakata’s cell unsatisfactory for its intended purpose. As stated in the MPEP § 2143.01, if a “proposed modification would render the prior art invention being modified unsatisfactory for its intended purpose, then there is no suggestion or motivation to make the proposed modification. *In re Gordon*, 733 F.2d 900, 221 USPQ 1125 (Fed. Cir. 1984).”

The Office asserts that, it “would have been obvious to one having ordinary skill in the art at the time the invention was made to use the battery housing of Harats et al. in Sakata et al. in order to enable the battery to be used in a device accepting standardized battery configurations and reduce the cost for manufacture.” See paragraph 9 on page 6

356-027-USP
By Facsimile

of the final Office action dated March 27, 2006. Applicant respectfully traverses this statement for at least the following reasons.

The invention disclosed in the Sakata reference deals with improving performance of a double layer capacitor by reducing its equivalent series resistance (ESR). See column 2, lines 17-24 of the Sakata reference. As stated above, according to the Sakata reference, the ESR of the capacitor is decreased when the capacitor cell is covered by an outer package in a decompression state due to a compressive force that is always applied on the capacitor from the outside by atmospheric pressure. See column 1, lines 51-59 of the Sakata reference.

By placing the capacitor cell disclosed in the Sakata reference into the battery housing disclosed in the Harats reference, one skilled in the art would remove the compressive force that is applied to the capacitor from the outside by the atmospheric pressure and thereby negate intended benefit of the increase in ESR. Eliminating the intended benefit of the Sakata reference would render Sakata's invention unsatisfactory for its intended purpose.

Applicant submits that the Office failed to establish a *prima facie* case of obviousness for the rejection of claims 1-17 and 20. Even if the Office established a *prima facie* case of obviousness (which Applicant contests), Applicant has traversed this case. Accordingly, Applicant respectfully requests that the rejection be withdrawn and that claims 1-17 and 20 be allowed.

3. There is no reasonable expectation of success that the modified device of the Sakata and Harats references proposed by the Office would work.

According to the MPEP § 2143.02, the "prior art can be modified or combined to reject claims as *prima facie* obvious as long as there is a reasonable expectation of success. *In re Merck & Co., Inc.*, 800 F.2d 1091, 231 USPQ 375 (Fed. Cir. 1986)." Applicant respectfully submits that there is no suggestion by the Office or in the cited references of a reasonable expectation of success in placing the capacitor disclosed in the Sakata reference into the battery housing disclosed in the Harats reference. On the

356-027-USP
By Facsimile

contrary, as stated above, the placing of the Harats' battery housing would eliminate the intended benefit (reduced ESR) of the capacitor disclosed in the Sakata reference.

In addition, as also stated above, the Sakata reference discloses a rectangular capacitor and the Harats reference discloses a cylindrical battery housing. To combine the cited references as suggested by the Office would require placing the rectangular capacitor cell disclosed in the Sakata reference into the cylindrical battery housing disclosed in the Harats reference. Applicant fails to understand why the Office believes that there would be a reasonable expectation of success in trying to place the rectangular capacitor cell of the Sakata reference into the cylindrical battery housing disclosed in the Harats reference. Placing a rectangular capacitor cell of the Sakata reference into the cylindrical battery housing of the Harats reference would require that the capacitor cell be somehow held within the cylindrical housing to prevent the capacitor cell from moving around within the housing. Applicant respectfully submits that neither of the cited references disclose any structure for holding the rectangular capacitor cell within the cylindrical battery housing, nor does the Office provide any insight into how one skilled in the art would modify either the capacitor cell of the Sakata reference and/or the cylindrical housing of the Harats reference to allow them to be combined. There is no reasonable expectation of success of trying to place the rectangular capacitor cell of the Sakata reference into the cylindrical battery housing of the Harats reference.

Accordingly, Applicant respectfully requests that the Office withdraw the rejection of claims 1-17 and 20 and that claims 1-17 and 20 be allowed.

In addition, the capacitor cell 20 disclosed in the Sakata reference has two parallel terminals 25 protruding from the same side of the capacitor cell 20 (see Figure 3 of the Sakata reference), while the battery housing of the Harats reference has terminals on opposite ends of the battery's housing. To combine the cited references as suggested by the Office would require routing the terminals 25 of the Sakata reference to opposite terminals of the battery housing of the Harats reference. Applicant fails to understand why the Office believes there would be a reasonable expectation of success in combining the Sakata and Harats reference given the terminal placement issue. Further, such a rerouting of the terminals 25 to the opposite-end terminals of the Harats battery housing would require an additional conduction path, which is not disclosed by either the Sakata

356-027-USP
By Facsimile

reference or the Harats reference. Therefore, there is no reasonable expectation of success in routing the parallel terminals 25 of the capacitor cell disclosed in the Sakata reference to opposite terminals of the battery housing disclosed in the Harats reference. Accordingly, Applicant respectfully requests that the Office withdraw the rejection of claims 1-17 and 20 and that claims 1-17 and 20 be allowed.

Because there is (1) no motivation to combine the cited references, (2) no evidence that the modified device would be satisfactory for its intended purpose even if it were possible to combine the references, and (3) no reasonable expectation of success either in the prior art or provided by the Office, the Office's attempt to combine the Sakata reference and the Harats reference is improper. For the reasons stated above, Applicant submits that the Office has failed to establish a *prima facie* case of obviousness for the rejection of claims 1-17 and 20. Even if the Office established a *prima facie* case of obviousness (which Applicant contests), Applicant has traversed this case. Accordingly, Applicant respectfully requests that the rejection be withdrawn and that claims 1-17 and 20 be allowed.

B. In addition to the foregoing, it would not be obvious to combine the Sakata reference and the Harats reference as suggested by the Office for at least the following reasons.

1. The Sakata and Harats references teach away from their combination.

As stated in the MPEP § 2143.01, "where teachings of two or more prior art references conflict, the Examiner must weigh the power of each reference to suggest solutions to one of ordinary skill in the art, considering the degree to which one reference might accurately discredit another. *In re Young*, 927 F.2d 588, 18 USPQ2d 1089 (Fed. Cir. 1991)."

As described above, the invention disclosed in the Sakata reference deals with improving performance of a double layer capacitor by reducing its equivalent series resistance (ESR). See column 2, lines 17-24 of the Sakata reference. According to the

356-027-USP
By Facsimile

Sakata reference, the ESR of the capacitor is decreased when the capacitor cell is covered by an outer package 22 in which the pressure in the outer package 22 is lower than atmospheric pressure. See column 7, lines 34-36 of the Sakata reference. The Sakata reference teaches that the compressive forces due to the atmospheric pressure decrease the ESR of the capacitor. See column 1, lines 51-57 of the Sakata reference.

The Harats reference, on the other hand, does not disclose the contents within the cylindrical battery housing are lower than atmospheric pressure. To the contrary, the Harats reference teaches that the battery's housing can be taken apart to be able to replace the battery's anode and cathode that are disposed within the cylindrical battery housing. The Office asserts that one skilled in the art would substitute the cylindrical battery housing disclosed in the Harats reference for the depressurized package of the capacitor cell disclosed in the Sakata reference. Applicant fails to understand why one skilled in the art would replace the depressurized package of the Sakata reference with the cylindrical battery housing of the Harats reference. Applicants submit that the Office has failed to establish a *prima facie* case of obviousness of claim 1-17 and 20. The combination of the references is improper because they teach away from their combination for at least the reasons stated above. Even if the Office established a *prima facie* case of obviousness (which Applicant contests), Applicant has traversed this case. Accordingly, Applicant respectfully requests that the rejection be withdrawn and that claims 1-17 and 20 be allowed.

2. A *prima facie* case of obviousness has not been established because the Harats reference is non-analogous art.

According to MPEP § 2143.01, "the test for obviousness is what the combined teachings of the references would have suggested to one of ordinary skill in the art, and all teachings in the prior art must be considered to the extent that they are in analogous arts" (emphasis added). "In order to rely on a reference as a basis for rejection of an applicant's invention, the reference must either be in the field of applicant's endeavor or, if not, then be reasonably pertinent to the problem with which the inventor was concerned." *In re Oetiker*, 977 F.2d 1443, 1446.

356-027-USP
By Facsimile

The Harats reference is directed to a non-analogous art because it is not in the Applicant's field of endeavor. The Harats reference teaches a nickel-zinc based battery with a removable anode and cathode. See column 3, line 62 and column 4, lines 10-13 of the Harats reference. The present application, on the other hand, relates to a capacitor. Applicant submits that the Harats reference teaching of a nickel-zinc based battery with a removable anode and cathode is not in the Applicant's field of endeavor.

The Harats reference is further non-analogous art because it is not reasonably pertinent to the particular problem with which the inventor was concerned. "A reference is reasonably pertinent if ... it is one which, because of the matter with which it deals, logically would have commended itself to an inventor's attention in considering the problem of improving a capacitor. One skilled in the art would not look to a nickel-zinc based battery when trying to improve a capacitor.

Because there is no motivation in the cited references, the cited references teach away from their combination, and the Harats reference is non-analogous art, the Office's attempt to combine the Sakata reference and the Harats reference is once again improper. For the reasons stated above, Applicants submit that the Office has failed to establish a *prima facie* case of obviousness of claim 1-17 and 20. Even if the Office established a *prima facie* case of obviousness (which Applicant contests), Applicant has traversed this case. Accordingly, Applicant respectfully requests that the rejection be withdrawn and that claims 1-17 and 20 be allowed.

IV. Rejections Under 35 U.S.C. §103 (Noguchi and O'Phelan)

Claim 25 stands rejected under 35 U.S.C. § 103(a) as being unpatentable over the Noguchi reference in view of United States patent number 6,509,588 issued to O'Phelan et al. (the O'Phelan reference). Applicant respectfully traverses this rejection for at least the following reasons.

Applicant submits that claim 25 is at least patentable based upon its dependency on claim 21 over the Noguchi reference and the O'Phelan reference because (1) there is no *prima facie* case of anticipation under 35 U.S.C. § 102 based on the Noguchi reference as discussed above, and (2) the Office has failed to show where the O'Phelan reference

RECEIVED
CENTRAL FAX CENTER

NUV 27 2006

356-027-USP
By Facsimile

discloses, teaches, or suggests the features not found in Noguchi and claimed by Applicants.

Extension of Time

This Amendment is submitted contemporaneously with a petition for a two-month extension of time in accordance with 37 CFR § 1.136(a). Accordingly, please charge Deposit Account No. 50-3199 in the amount of \$225.00 for a twoe-month extension of time fee. The Applicant believes no further fees or petitions are required. However, if any such petitions or fees are necessary, please consider this a request therefor and authorization to charge Deposit Account No. 50-3199 accordingly.

Conclusion

Based on the amendments and remarks herein, the Applicants respectfully request prompt issuance of a notice of allowance for claims 1-19 and 21-29.

Respectfully Submitted,

Dated: November 27, 2006.

By: Thomas J. Osborne, Jr.
Thomas J. Osborne, Jr.
Reg. No. 39,796
Hensley Kim & Edgington, LLC
1660 Lincoln Street, Suite 3050
Denver, CO 80264
(720) 377-0759 (telephone)
(720) 377-0777 (facsimile)